positioning the microfluidic device proximate to the substrate with the plurality of nozzles facing the substrate; and

transporting each sample from one reservoir to a respective nozzle tip where the sample is discharged through the nozzle opening onto the substrate to form a sample spot on the substrate.

59. The process of claim 58, wherein the diameter of the nozzle opening is equal to or less than about 20 μm and the outside diameter of the nozzle is equal to or less than about 50 μm.

60. The process of claim 58, wherein the samples contain DNA segments so that the resulting array of spots is a DNA array spotting.

61. The process of claim 58, wherein the samples contain protein molecules so that the resulting array of spots is a protein array spotting.

62. The process of claim 58, further including the step of:

pumping the sample through channel to the nozzle opening with high pressure air that is directed into the reservoir section.

63. The process of claim 58, further including the step of:

applying an electric field to the second surface of the body around each nozzle, the electric field being of sufficient strength so as to cause the discharged sample to be vaporized and ionized.

64. A kit for constructing a microfluidic device from a plurality of smaller microfluidic subunit structures, the kit comprising:

a frame including at least two rails that are spaced apart from one another so that an opening is formed therebetween, each rail including a predetermined number of clamping members that are arranged so that the clamping members of adjacent rails form a number of pairs disposed across the opening from one another, each pair of clamping members receiving a section of one of the microfluidic subunit structures so as to securely hold the microfluidic subunit structure in place and position at least one microfluidic feature of the microfluidic subunit structure within the opening between the adjacent rails.

65. The kit of claim 64, wherein each of the microfluidic subunit structures is a microfluidic device having an array of nozzles formed along a surface thereof and the at least one microfluidic feature comprises the array of nozzles.

66. The kit of claim 64, wherein the rails are disposed parallel to one another and the clamping members forming one pair are axially aligned with one another across the opening formed between the rails.

67. The kit of claim 64, wherein each clamping member includes a pair of walls spaced apart from one another with a retaining slot defined therebetween for receiving the section of the microfluidic subunit structure which is held frictionally between the pair of walls.

68. The kit of claim 64, wherein each rail includes a predetermined number of clamping members arranged in pairs along the length of the rail, one clamping member of the pair frictionally engaging one microfluidic subunit structure while the other clamping member of the pair frictionally engages an adjacent microfluidic subunit structure.

69. The kit of claim 64, wherein the frame is a molded structure formed of a plastic material with the clamping members being integrally formed as a part thereof.

70. The kit of claim 64, wherein the plurality of rails includes at least three rails spaced apart from one another, the clamping members being arranged along the lengths of the rails to define a grid having discrete sectors for receiving one microfluidic subunit structure.

71. The kit of claim 64, wherein the at least one microfluidic feature comprises the array of nozzles and respective reservoir sections that are associated with the array of nozzles for receiving a sample.

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